

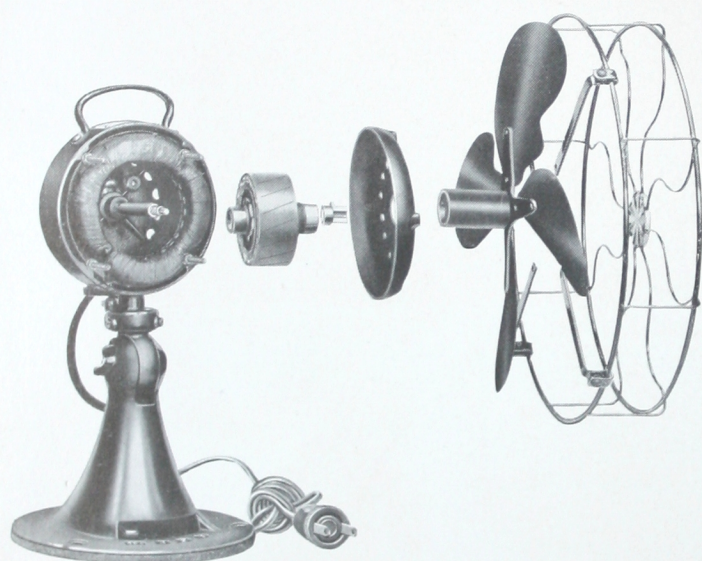
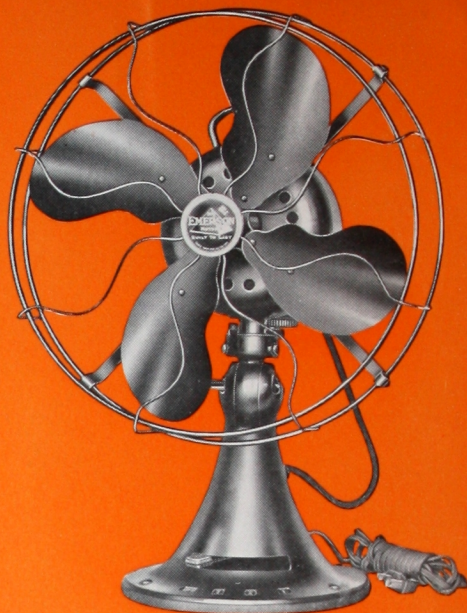
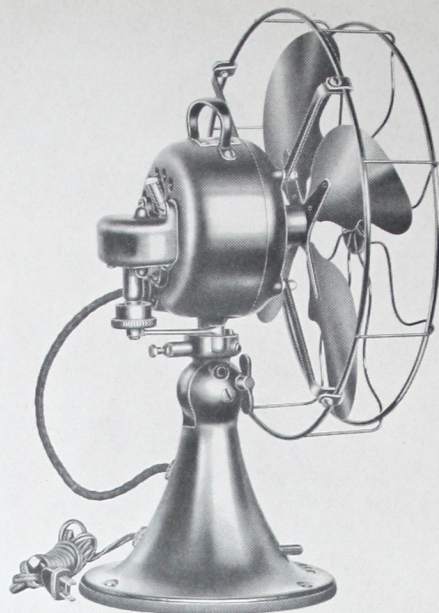
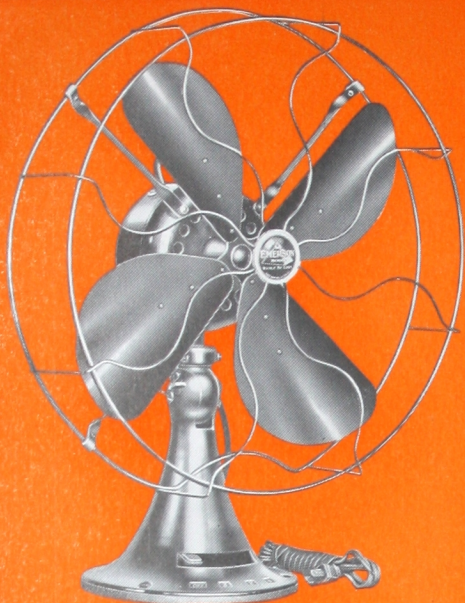
1072-7.

JUL 5 1938

The
**INSIDE
STORY
OF
EMERSON-ELECTRIC FANS**



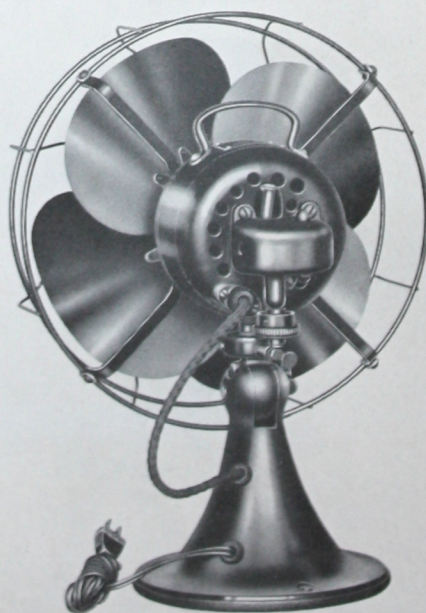
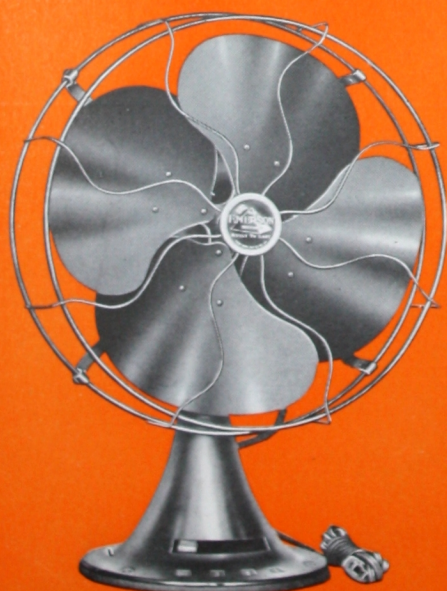
**DISTINCTIVE DESIGN FEATURES
THAT GUARANTEE LONG LIFE**



Emerson-Electric Parker-blade Fans have been nationally known and accepted as "the standard" of fan value since the early 'nineties. Emerson-Electric "Patented" Overlapping-blade Fans, a comparatively recent development, are unusually quiet in operation.

Constant Engineering Research and Development by Emerson-Electric since its incorporation in 1890, has resulted in the introduction and pioneering of many important contributions to the science of fan manufacture.

On this page you see illustrations of the 1938 models of Emerson-Electric Oscillating Fans of both Parker and Overlapping-blade types, in 12-inch and 16-inch sizes, for Alternating Current—all of which embody *all* the features illustrated on the succeeding pages of this book.



1072-7



The Inside Story

What's the advantage of Emerson-Electric Fans over those of other manufacture? If you are the seller, that's the question you are called upon to answer. If you are the buyer, you will expect a sound, logical, and convincing reply.

Claims are empty and valueless unless backed by proof. You want facts. To help you buy or sell, we give you on the pages that follow, the "Inside Story" of Emerson-Electric Fan construction.

In this book we show you, feature by feature, the results and achievements of years of scientific research—show you why thousands of Emerson-Electric Fan users get 25 to 40 years' service—show you why for twenty-four consecutive years the famous 5-Year Factory-to-User Guarantee has distinguished Emerson-Electric Fans from all others.

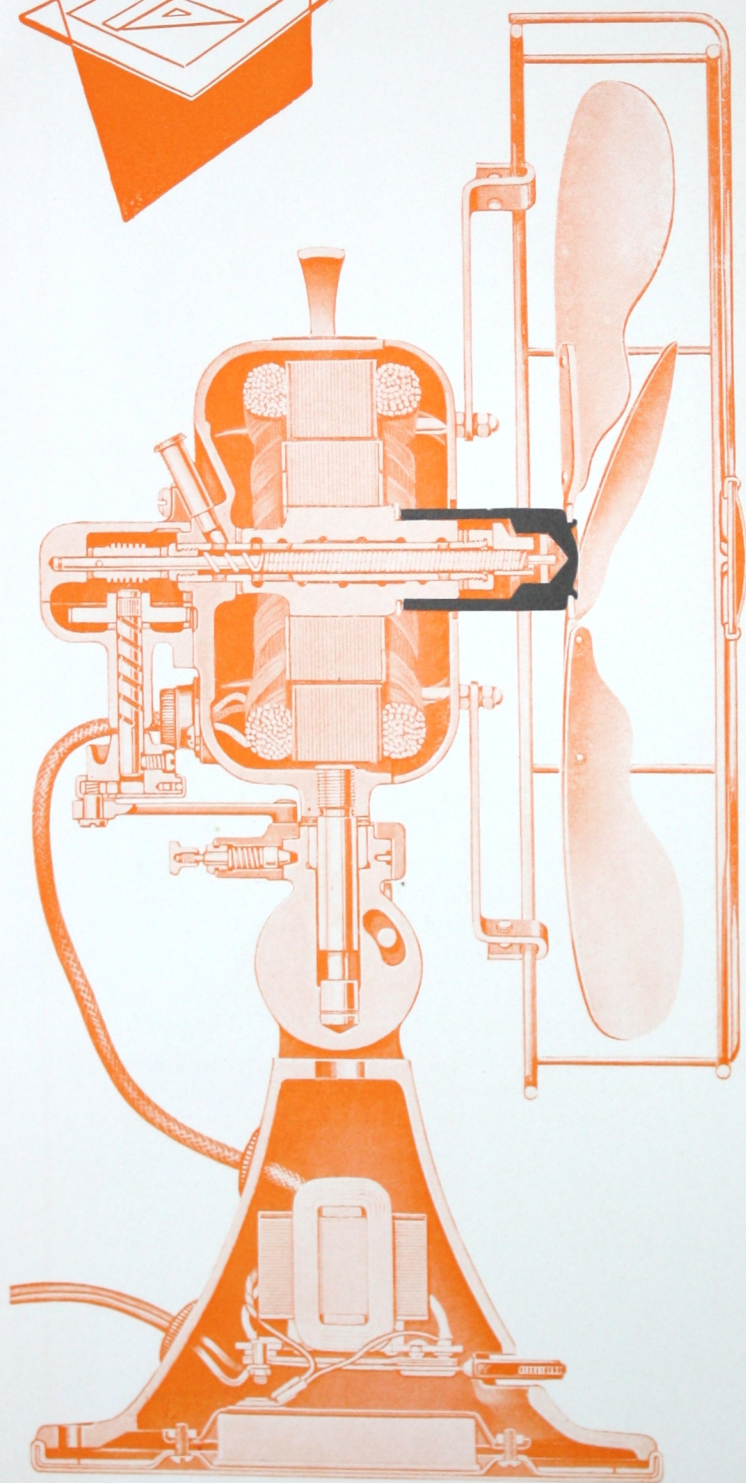
Read the "Inside Story," a graphic presentation which explains why so many of the nation's leading industrial and commercial organizations have standardized on Emerson-Electric Fans. Then you will better understand the reason for our statement—"Leaders in the Fan and Motor Industry Since 1890."



Distinctive Features

THAT MAKE EMERSON-ELECTRIC *Life-time* FANS

Design Feature No. 1



EXCLUSIVE SEALED BEARING

The steel fan hub, to which the fan blades are attached is threaded and screws onto the armature against a sealing gasket. This construction hermetically seals the front end of the bearing and prevents oil from reaching blades and being spattered on walls and furnishings.

This construction likewise prevents dirt, grit or foreign matter from entering and damaging the bearing surfaces.

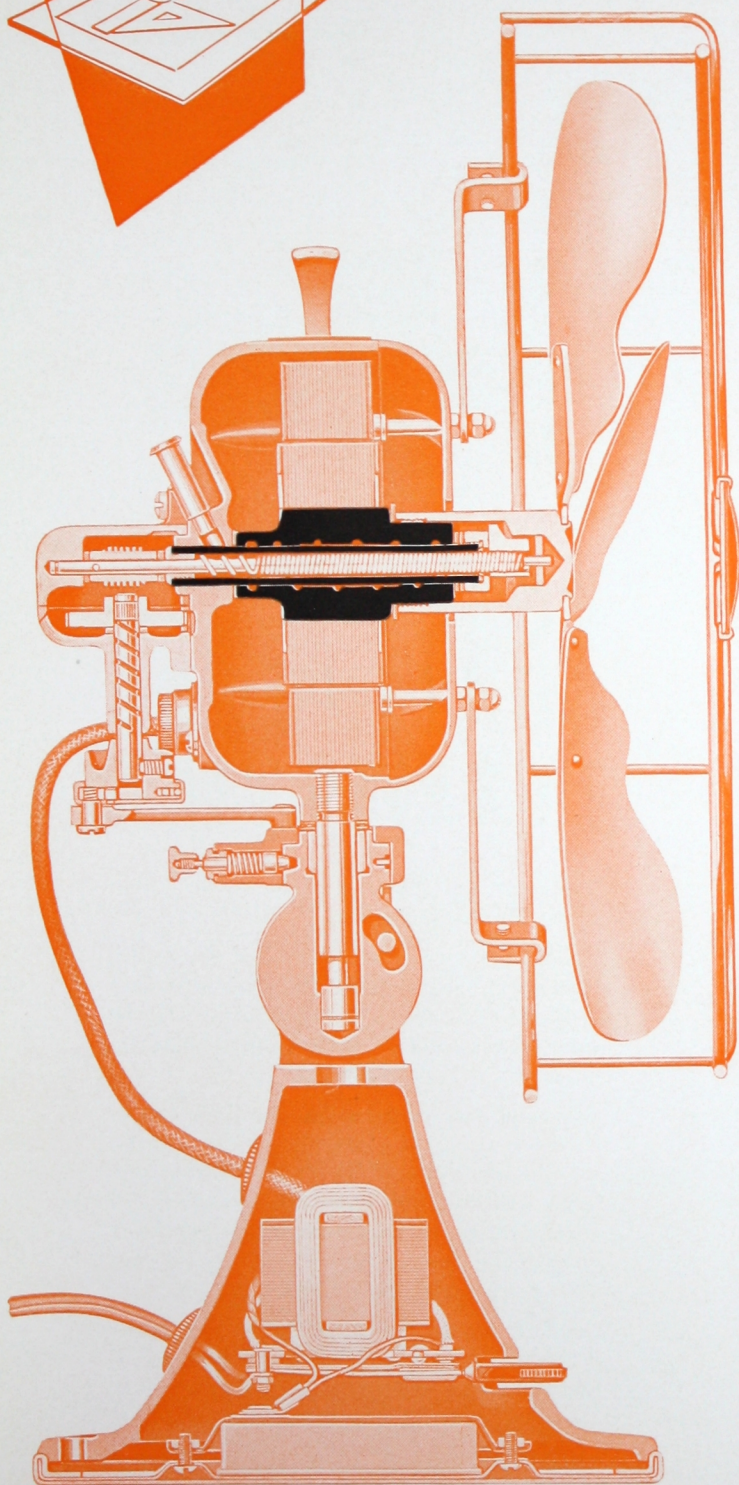
A Feature since 1898.



Distinctive Features

THAT MAKE EMERSON-ELECTRIC *Life-time* FANS

Design Feature No. 2



EXCLUSIVE BEARING CONSTRUCTION

The black portion of this illustration shows the unique construction of the "Sealed" Emerson-Electric Fan Bearing—an exclusive feature for over 40 years.

The armature rotates on a stationary $\frac{1}{2}$ -inch diameter, case-hardened, hollow-steel shaft pressed into the motor frame. The armature core is porous cast-iron which absorbs oil and the bearing surfaces of both core and case-hardened steel shaft acquire a fine glaze, like plated metal, which makes practically an everlasting bearing.

Each armature core is hand reamed to fit the tapered hollow shaft with which it is used. Each motor assembly is given a 2-hour "run-in" test to assure a perfect bearing fit.

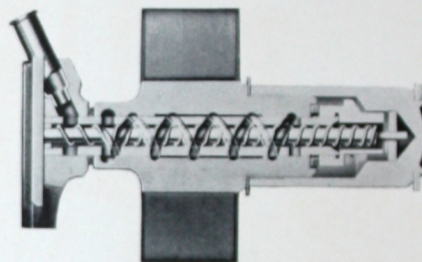
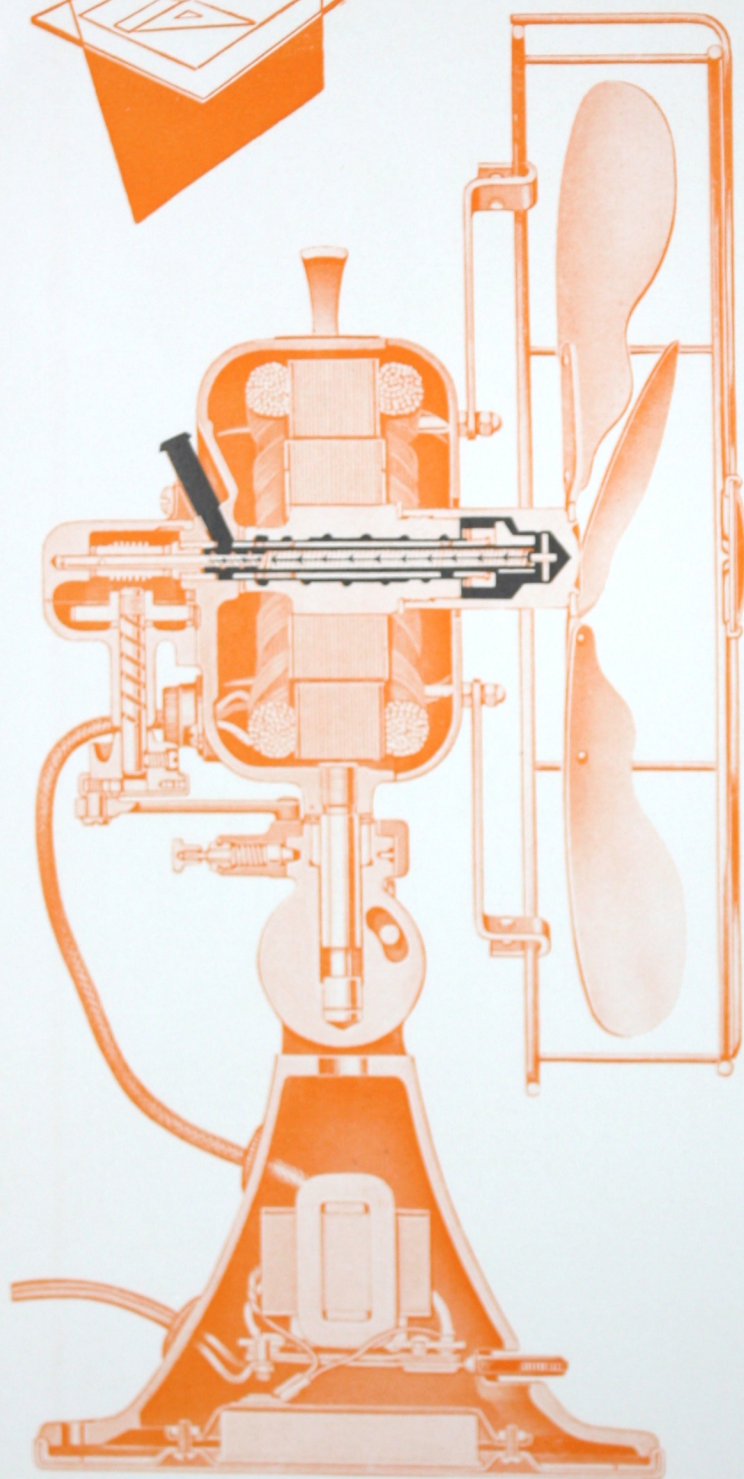
A Feature since 1898.



Distinctive Features

THAT MAKE EMERSON-ELECTRIC *Life-time* FANS

Design Feature No. 3



FORCE - FEED CONTINUOUS LUBRICATION

This sectional illustration shows the circulating lubrication system.

A stationary wiper on the end of the hollow (stationary) shaft causes the lubricant stored in the fan hub to be circulated down on the spiral oil conveyor on the floating worm shaft, inside of the hollow shaft.

When the lubricant reaches the back end of the hollow shaft it is forced out through the slots in the hollow shaft to the bearing surfaces. The armature core bearing surface has a spiral oil groove which carries the lubricant forward, lubricating the entire length of the shaft as it travels back to the fan hub.

Only one oil cup at the back of the motor and it is large enough for a full season's supply of lubricant.

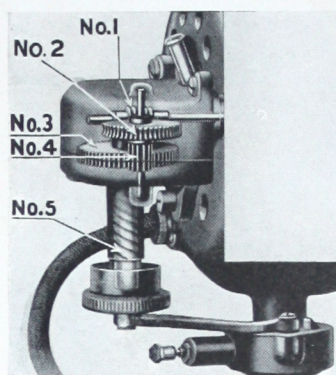
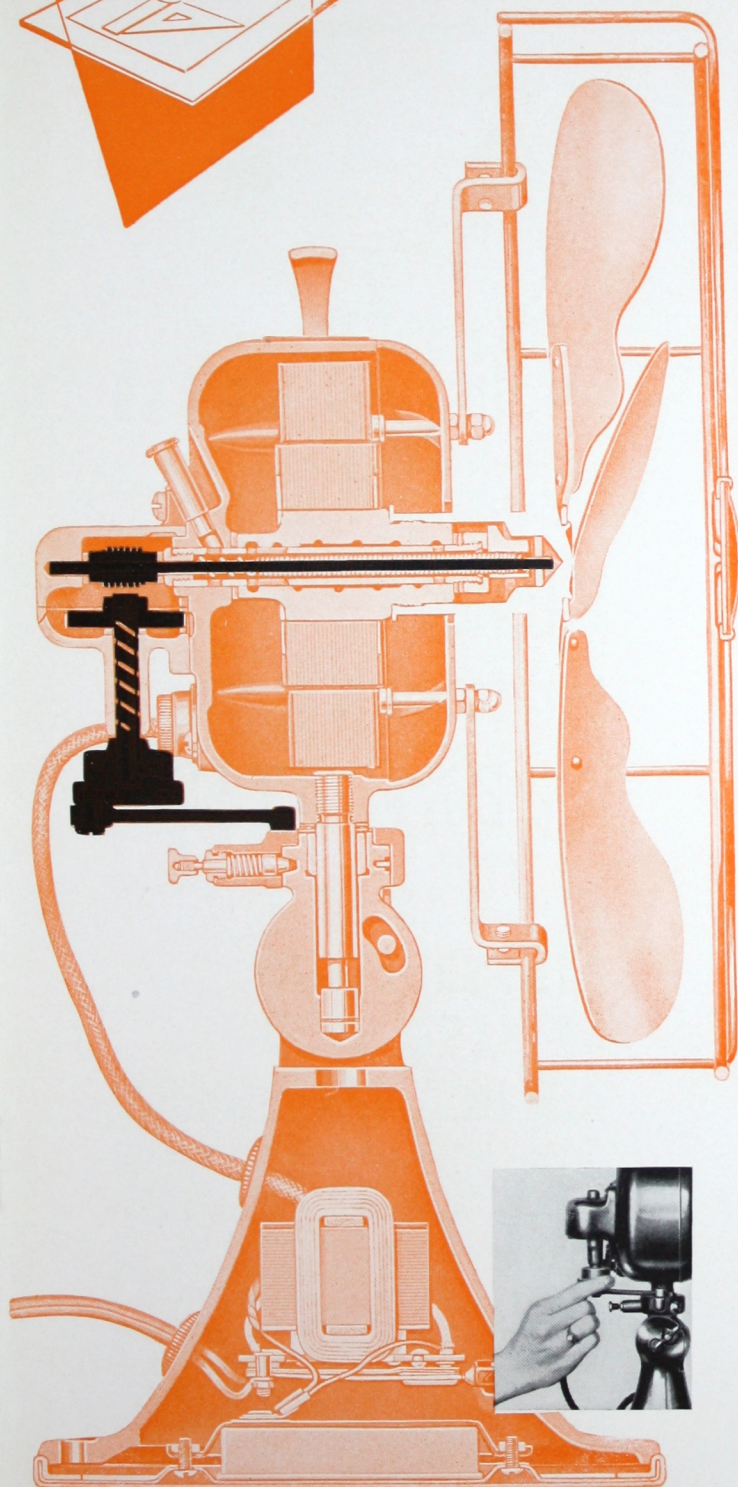
A Feature since 1927.



Distinctive Features

THAT MAKE EMERSON-ELECTRIC *Life-time* FANS

Design Feature No. 4



OSCILLATING MECHANISM- FINGER-TIP CONTROL

The case-hardened worm drive (1) on the floating shaft meshes with a solid bronze worm wheel (2) mounted on its own shaft with a steel pinion (3) which in turn drives the bronze spur gear (4) attached to the steel spur shaft (5).

This spur gear shaft has an oil groove to provide continuous lubrication and prevent leakage from the gear case. The oscillating link between base and adjusting case is made of solid cast bronze for long service.

Finger-tip adjustment from non-oscillating position to any range of oscillation up to 90° is obtained by simply turning the knurled rim of the adjusting case. Adjustment is instantaneous and is accomplished without tools of any kind and with absolute safety while the fan is in operation.

A Feature since 1918.





Distinctive Features

THAT MAKE EMERSON-ELECTRIC *Life-time* FANS

Design Features Nos. 5 and 6

FIG. A

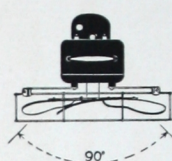
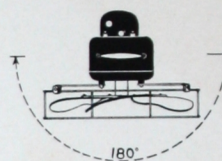


FIG. B



EXCLUSIVE ADJUSTING COLLAR

The "patented" adjusting collar permits centering the breeze at any one of five positions within a 90° arc (Fig. A), without moving the base, and without the use of tools.

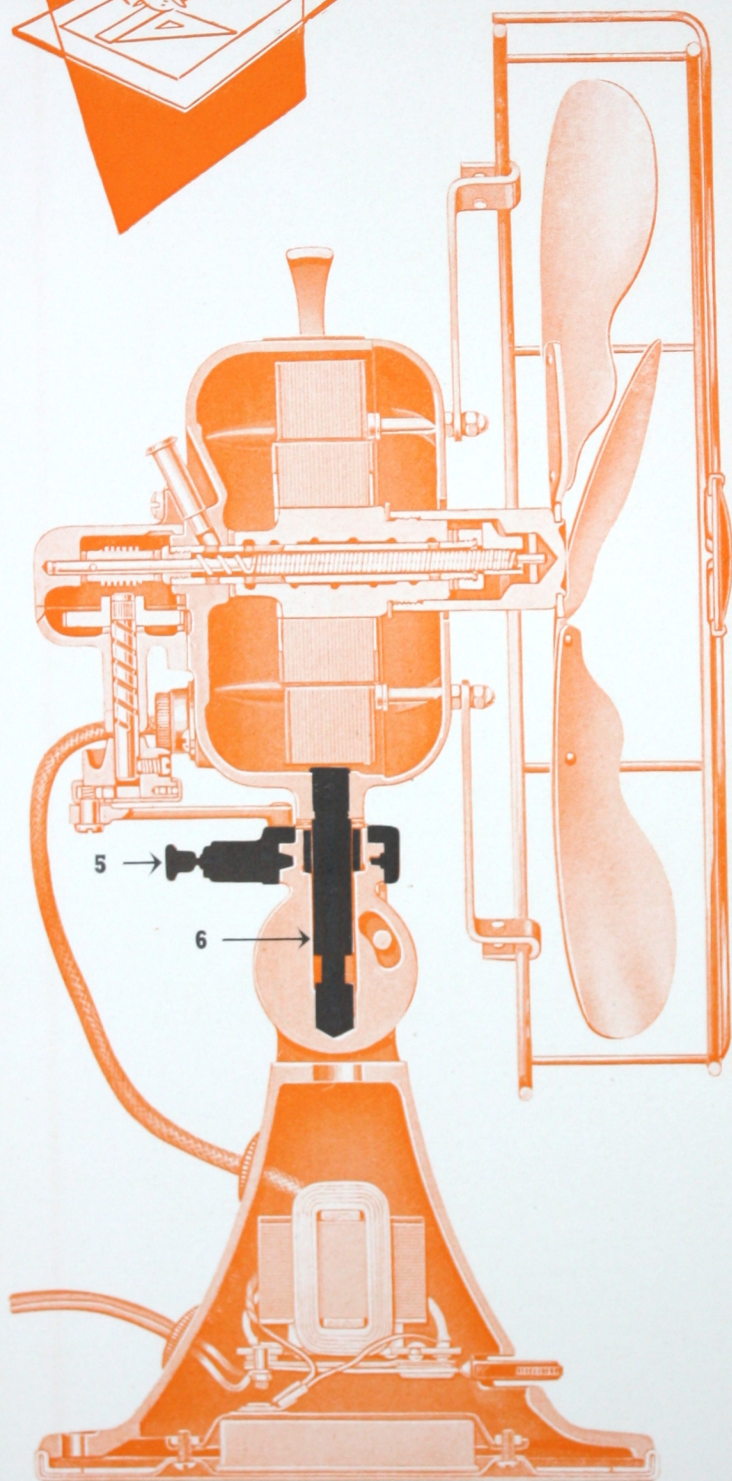
The latch handle is locked in position by a tension spring. To change center of oscillation merely pull out the latch handle and swing the motor to the desired location. This is particularly advantageous when the fan is mounted on a horizontal surface or in bracket position on the wall. The oscillating adjusting case and adjusting collar combine to permit adjustment over an arc of 180° (Fig. B) with the base in a fixed position.

A Feature since 1913.

CONSTRUCTION OF BASE STUD AND BASE STUD BEARING

Sectional view emphasizes the details of this important construction feature. The base stud is threaded into the motor casting and the top coined over to make a rigid assembly. The recess in the stud near the bottom receives the pivot screws which hold the motor mounting secure on the base. The stud bearing is made of special porous-composition bronze, impregnated with oil. It provides complete freedom of oscillation movement without vibration and without relubrication.

A Feature since 1927.

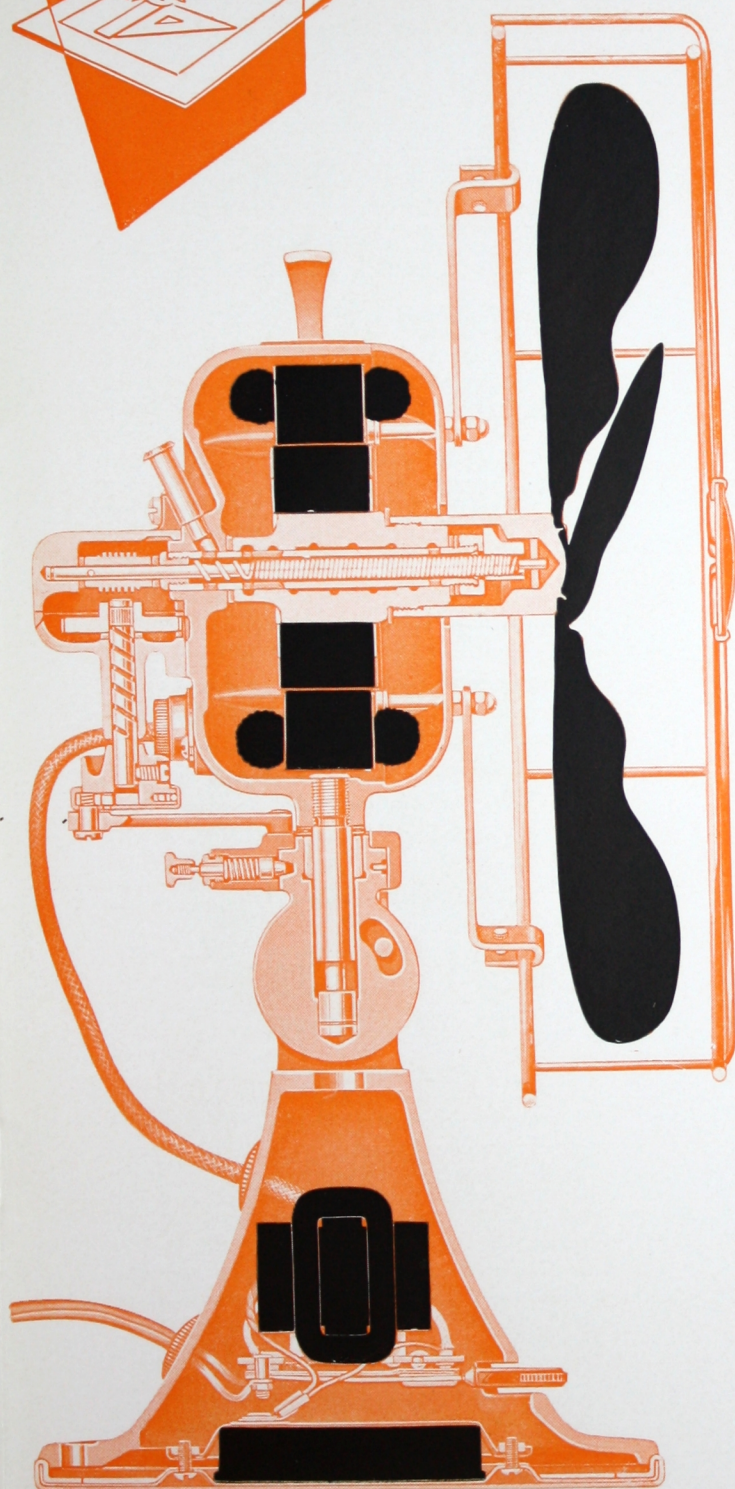




Distinctive Features

THAT MAKE EMERSON-ELECTRIC *Life-time* FANS

Design Features Nos. 7 and 8



CAPACITOR MOTORS

Here you see the latest, and one of the most important contributions to the famous Emerson-Electric Fans.

Motor field windings, field iron and squirrel cage rotor are indicated in black in the motor housing. The parts indicated in black in the base are the choke coil used for speed regulation and the specially built condensers.

These new Capacitor Motors accelerate starting and reduce by 55% to 87% the time required to bring the fans up to full speed, depending upon the model, and with reductions in current consumption of 24% to 40%.

A Feature since 1936.

BLADE FABRICATION AND FINISH

Blades are securely riveted to the blade flange and each set is accurately balanced to assure smooth, vibrationless operation. Parker Blades are made of steel, Parkerized and finished in durable Lacquer. Overlapping Blades are made of aluminum, anodically treated to prevent corrosion and then finished in durable Lacquer.



Distinctive Features

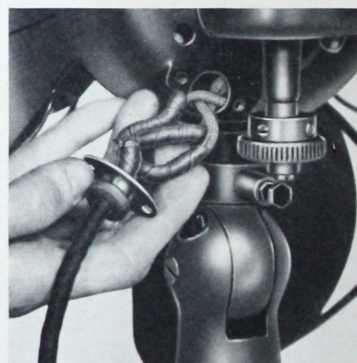
THAT MAKE EMERSON-ELECTRIC *Life-time* FANS

Design Feature No. 9

SPECIAL TINSEL OSCILLATING CORD

These oscillating cords which are made to Emerson-Electric's special specifications have endurance test records in excess of two hundred million oscillations. Translated into service on a 16-inch Emerson-Electric Oscillating Fan, making 7 complete oscillations per minute, it is equal to more than 54 years of continuous operation, 24 hours per day. The special material in the tinsel cord which gives it such long life is typical of the high standards of construction that make Emerson-Electric Fans lifetime fans.

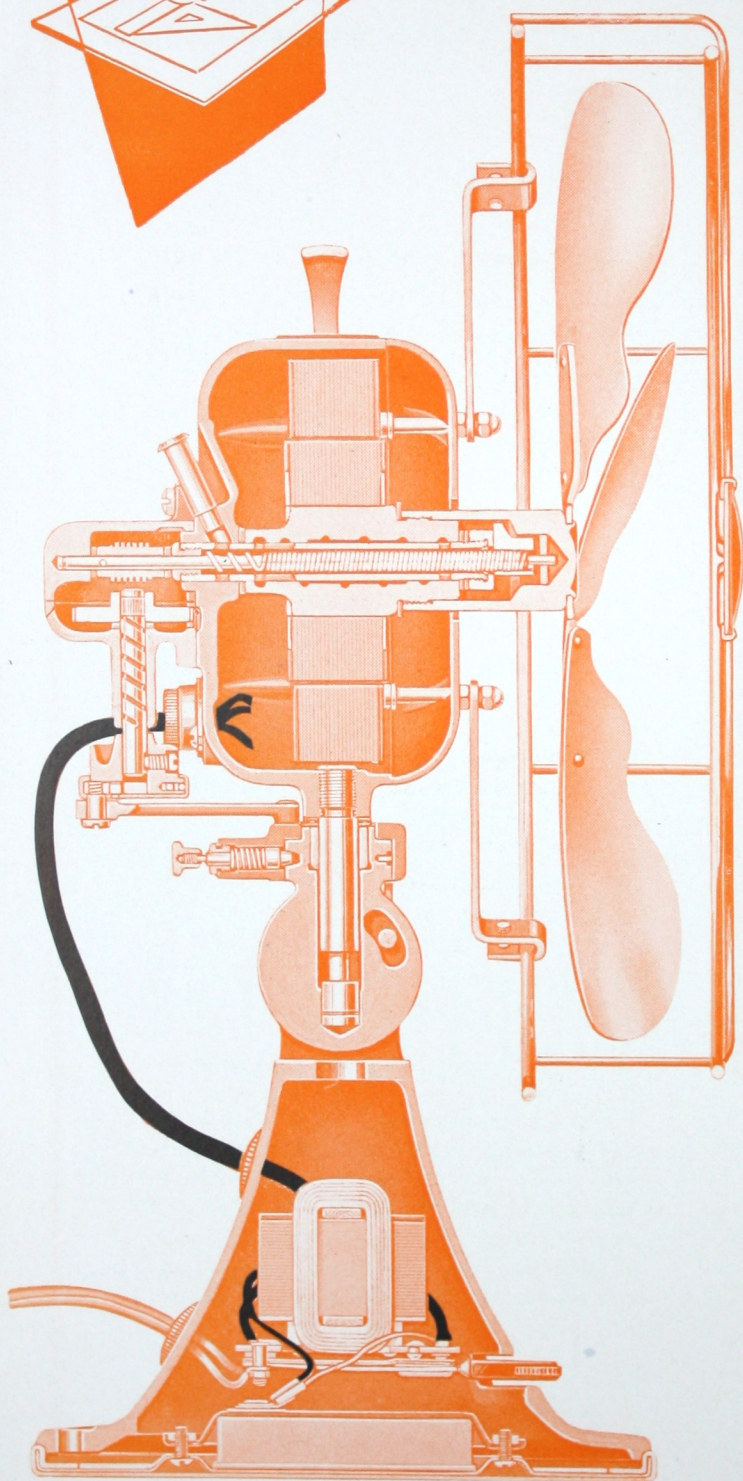
A Feature since 1928.



Oscillating Cord Easily Replaced

It is not necessary to dismantle the motor to make replacement of an oscillating cord. Merely remove the two screws which hold the oscillating cord bushing plate and pull out the extra length of leads to which it is connected. The new cord is then connected to the leads, the leads pushed back into the recess in the fan motor cover and the bushing plate replaced. The other end of the cord is attached to the proper points in the base after removing the felt-covered base plate.

Every servicing requirement has been given special attention in the design and users find it is an important advantage in the maintenance of Emerson-Electric Fans.

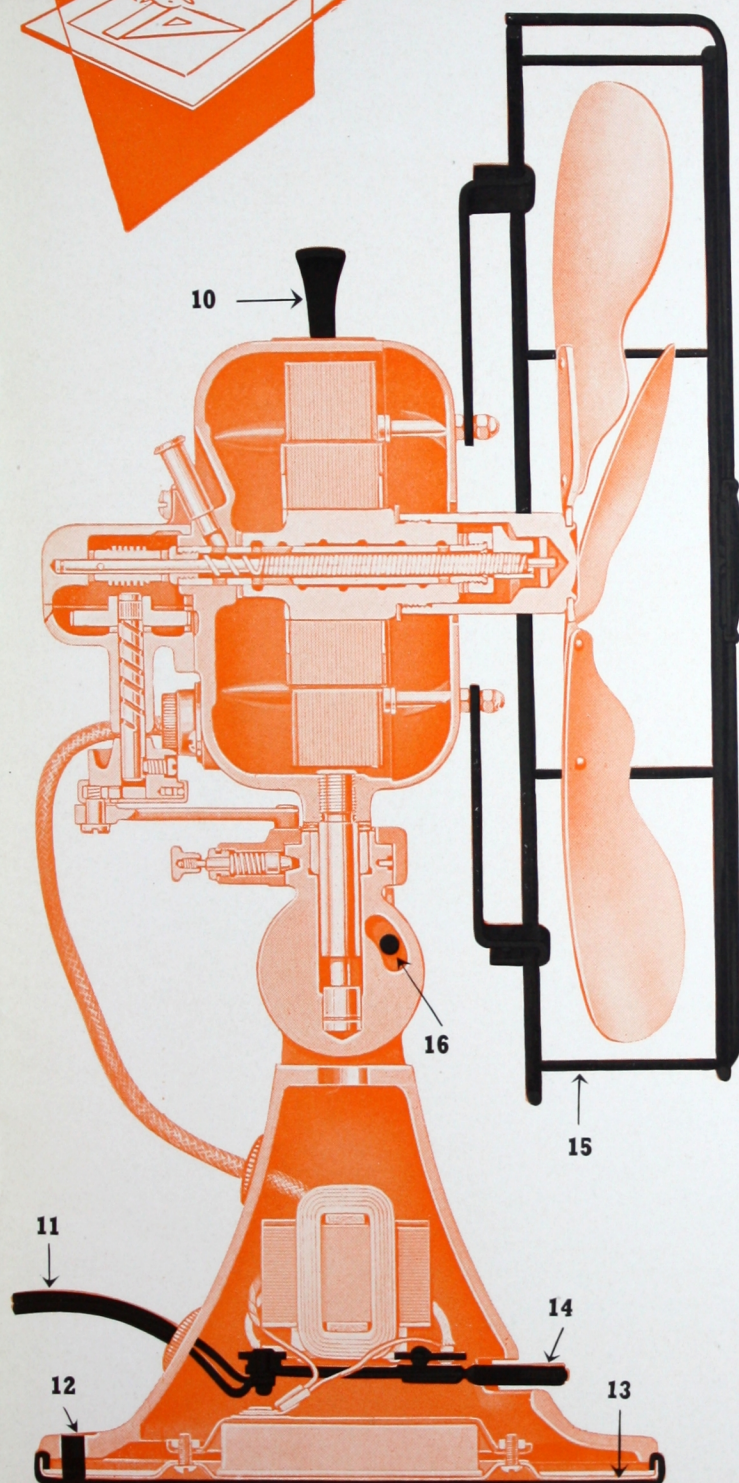




Distinctive Features

THAT MAKE EMERSON-ELECTRIC *Life-time* FANS

Design Features Nos. 10 to 16



No. 10. Convenient Carrying Handle

Firmly attached to the motor. *A Feature since 1915.*

No. 11. Extension Cord and Plug

Durable 8-foot rubber covered cord and soft rubber plug attached to each fan. Approved by Underwriters. *A Feature since 1936.*

No. 12. Provision for Mounting

Three drilled holes in base casting simplify mounting. *A Feature since 1915.*

No. 13. Felt Covering for Base

To protect polished surfaces the base plate is covered with felt and all base bolts are countersunk. Felt can be easily replaced if damaged or worn. *A Feature since 1918.*

No. 14. Three-Speed Switch Details

Easy to operate lever-type switch. Insulated handle. All parts are non-inflammable and moisture-proof. Switch Contact not affected by pressure on the handle. *A Feature since 1910.*

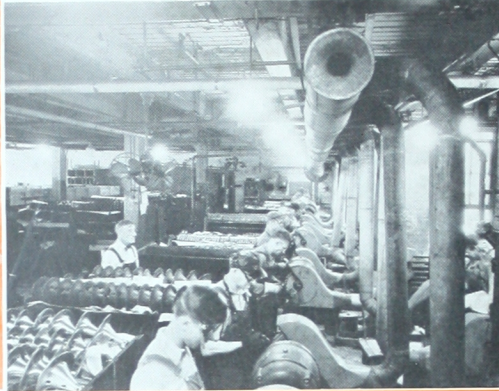
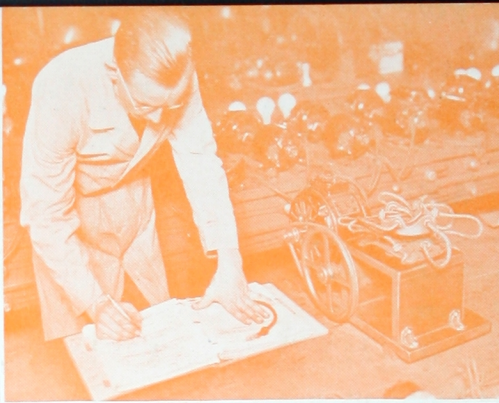
No. 15. Guard Construction

Double-ring guard of steel wire with all joints spot-welded. Guard arms are also made of steel and hold the guard securely on the motor body. *A Feature since 1913.*

No. 16. Clamping Screw with Wing Head

Holds fan motor securely at desired position. No tools necessary for changing adjustment. *A Feature since 1908.*

The extreme accuracy with which all parts of Emerson-Electric Fans are machined and gauged assures mechanical perfection.



TESTS — HUNDREDS OF TESTS

From the first step in the manufacturing of Emerson-Electric Fans to the finished product, every part passes through the hands of skilled workers constantly engaged in gauging accuracy and testing for performance. This policy of precision manufacturing is responsible for Emerson - Electric's International reputation — "Leaders in the Fan and Motor Industry Since 1890."

